

## WHAT IS CLAIMED IS:

1. An apparatus for determining the function of a circuit board disposed in a slot in an enclosure and in electrical communication with said enclosure, which comprises in combination:
  - (a) means located within said enclosure for displaying a characteristic of the slot;
  - (b) means disposed on said circuit board for detecting the characteristic; and
  - (c) a processor for interpreting the detected characteristic and for directing said circuit board to perform the function associated therewith.
2. The apparatus as described in claim 1, wherein said means located within said enclosure for displaying a characteristic of the slot comprises means for generating at least one signal, and at least one tab disposed within the interior of the slot capable of substantially reducing the at least one signal.
3. The apparatus as described in claim 2, wherein said means disposed on said circuit board for detecting the characteristic of the slot comprises means for detecting the at least one signal.
4. The apparatus as described in claim 3, wherein said means for generating at least one signal comprises a source of light, and wherein said means for detecting the characteristic of the slot comprises at least one light detector adapted for detecting light generated from said source of light.
5. The apparatus as described in claim 4, wherein said at least one tab is disposed in a pattern characteristic of the slot, and said at least one light detector, reproduces the pattern characteristic of the slot.
6. The apparatus as described in claim 5, wherein the light generated from said source of light is substantially reduced by said at least one

tab when said at least one tab is disposed between said source of light and said at least one light detector.

7. The apparatus as described in claim 5, wherein said at least one source of light comprises at least one light emitting diode and said at least one light detector comprises a charge-coupled detector.
8. The apparatus as described in claim 1, wherein said means displaying a characteristic of the slot comprises at least one source of light; and said means for detecting the characteristic of said slot comprises at least one light detector adapted for detecting light generated by said at least one source of light, whereby the pattern characteristic of the slot is reproduced by said at least one light detector.  
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9. The apparatus as described in claim 8, wherein said source of light comprises at least one light emitting diode and said at least one light detector comprises a charge-coupled detector.
10. The apparatus as described in claim 1, wherein said means for detecting the characteristic of the slot comprises at least one microswitch in electrical communication with said processor, and said means for displaying a characteristic of the slot comprises at least one projection positioned on a wall of said enclosure disposed in a pattern characteristic of the slot and adapted to actuate one of said at least one microswitch when said circuit board is inserted into the slot, such that the characteristic of the slot is sensed by said at least one microswitch.  
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11. The apparatus as described in claim 1, wherein said means disposed on said circuit board for detecting the characteristic of the slot comprises a Hall-effect apparatus.
12. A method for determining the function of a circuit board disposed in a slot in an enclosure, comprising the steps of:  
displaying a characteristic of the slot inside of the enclosure;  
detecting the displayed characteristic on the circuit board;  
interpreting the detected characteristic on the circuit board; and  
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- directing the circuit board to perform the function associated with the interpreted characteristic of the slot.
13. The method as described in claim 12, wherein said step of displaying a characteristic of the slot comprises generating at least one signal and blocking the at least one signal in a pattern characteristic of the slot.
14. The method as described in claim 13, wherein said step of detecting the characteristic of the slot comprises detecting the at least one signal on the circuit board.
15. The method as described in claim 12, wherein said step of generating at least one signal is achieved using a source of light, said step of blocking the at least one signal is achieved using tabs disposed within the slot in a pattern characteristic of the slot, and said step of detecting the at least one signal is achieved using a light detector disposed on the circuit board.
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16. The method as described in claim 12, wherein said step of displaying a characteristic of the slot is achieved using at least one source of light; and said step of detecting the characteristic of the slot is achieved using at least one light detector disposed on the circuit board and adapted for detecting light generated by said at least one source of light, whereby the pattern characteristic of the slot is reproduced by the at least one light detector.
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17. The method as described in claim 12, wherein said step of detecting the characteristic of the slot is achieved using at least one microswitch and said step of displaying a characteristic of the slot is achieved using at least one projection positioned within the slot in a pattern characteristic of the slot and adapted to actuate one of the at least one microswitch when the circuit board is inserted into the slot, such that the characteristic of the slot is detected by the at least one microswitch.
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18. The method as described in claim 12, wherein said step of detecting the characteristic of the slot is achieved using a Hall-effect apparatus.